

ORIGINAL



0000120809

BEFORE THE ARIZONA CORPORATION COMMISSION  
RECEIVED

COMMISSIONERS

KRISTIN K. MAYES, Chairman

2010 DEC 14 P 3:44

GARY PIERCE

PAUL NEWMAN

AZ CORP COMMISSION  
DOCKET CONTROL

SANDRA D. KENNEDY

BOB STUMP

IN THE MATTER OF THE APPLICATION OF  
GLOBAL WATER – PALO VERDE UTILITIES  
COMPANY FOR THE ESTABLISHMENT OF JUST AND  
REASONABLE RATES AND CHARGES FOR UTILITY  
SERVICE DESIGNED TO REALIZE A REASONABLE  
RATE OF RETURN ON THE FAIR VALUE OF ITS  
PROPERTY THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. SW-20445A-09-0077

IN THE MATTER OF THE APPLICATION OF  
VALENCIA WATER COMPANY – GREATER  
BUCKEYE DIVISION FOR THE ESTABLISHMENT OF  
JUST AND REASONABLE RATES AND CHARGES FOR  
UTILITY SERVICE DESIGNED TO REALIZE A  
REASONABLE RATE OF RETURN ON THE FAIR  
VALUE OF ITS PROPERTY THROUGHOUT THE  
STATE OF ARIZONA

DOCKET NO. W-02451A-09-0078

IN THE MATTER OF THE APPLICATION OF  
WILLOW VALLEY WATER CO. FOR THE  
ESTABLISHMENT OF JUST AND REASONABLE  
RATES AND CHARGES FOR UTILITY SERVICE  
DESIGNED TO REALIZE A REASONABLE RATE OF  
RETURN ON THE FAIR VALUE OF ITS PROPERTY  
THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. W-01732A-09-0079

IN THE MATTER OF THE APPLICATION OF  
GLOBAL WATER – SANTA CRUZ WATER COMPANY  
FOR THE ESTABLISHMENT OF JUST AND  
REASONABLE RATES AND CHARGES FOR UTILITY  
SERVICE DESIGNED TO REALIZE A REASONABLE  
RATE OF RETURN ON THE FAIR VALUE OF ITS  
PROPERTY THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. W-20446A-09-0080

IN THE MATTER OF THE APPLICATION OF  
WATER UTILITY OF GREATER TONOPAH FOR  
THE ESTABLISHMENT OF JUST AND REASONABLE  
RATES AND CHARGES FOR UTILITY SERVICE  
DESIGNED TO REALIZE A REASONABLE RATE OF  
RETURN ON THE FAIR VALUE OF ITS PROPERTY  
THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. W-02450A-09-0081

Notice of Filing Compliance  
(Decision No. 71878)

Arizona Corporation Commission  
DOCKETED

DEC 14 2010

DOCKETED BY

*[Signature]*

1 IN THE MATTER OF THE APPLICATION OF  
2 VALENCIA WATER COMPANY – TOWN DIVISION  
3 FOR THE ESTABLISHMENT OF JUST AND  
4 REASONABLE RATES AND CHARGES FOR UTILITY  
5 SERVICE DESIGNED TO REALIZE A REASONABLE  
6 RATE OF RETURN ON THE FAIR VALUE OF ITS  
7 PROPERTY THROUGHOUT THE STATE OF ARIZONA

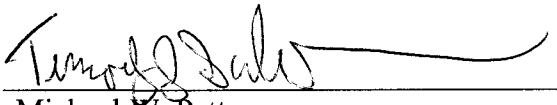
DOCKET NO. W-01212A-09-0082

**Notice of Filing Compliance  
(Decision No. 71878)**

8 Decision No. 71878 (September 15, 2010) requires Willow Valley Water Company, Valencia  
9 Water Company – Greater Buckeye and Water Utility Tonopah (collectively the “Global Utilities”), to file  
10 within 90 days, as a compliance item with the Commission's Docket Control, a detailed plan  
11 demonstrating how the various systems will reduce their water loss to less than 10 percent.  
12 Accordingly, the Global Utilities file their plan for reducing water loss to 10% for the relevant water  
13 systems.

14 RESPECTFULLY SUBMITTED this 14<sup>th</sup> day of December 2010.

15 ROSHKA DEWULF & PATTEN, PLC

16 By   
17 Michael W. Patten  
18 Timothy J. Sabo  
19 One Arizona Center  
20 400 East Van Buren Street, Suite 800  
21 Phoenix, Arizona 85004

*Attorneys for Global Utilities*

22  
23 Original +13 copies of the foregoing  
24 filed this 14<sup>th</sup> day of December 2010, with:

25 Docket Control  
26 Arizona Corporation Commission  
27 1200 West Washington  
Phoenix, AZ 85007

1 Copies of the foregoing hand-delivered/mailed  
2 this 14th day of December 2010, to:

3 Lyn A. Farmer, Esq.  
4 Chief Administrative Law Judge  
5 Hearing Division  
6 Arizona Corporation Commission  
7 1200 West Washington  
8 Phoenix, AZ 85007

9 Janice Alward, Esq.  
10 Chief Counsel, Legal Division  
11 Arizona Corporation Commission  
12 1200 West Washington  
13 Phoenix, AZ 85007

14 Mr. Steve Olea  
15 Director, Utilities Division  
16 Arizona Corporation Commission  
17 1200 West Washington  
18 Phoenix, AZ 85007

19 Brian Bozzo  
20 Compliance Enforcement Manager  
21 Utilities Division  
22 Arizona Corporation Commission  
23 1200 West Washington  
24 Phoenix, AZ 85007

Daniel W. Pozefsky, Esq.  
Chief Counsel,  
Residential Utility Consumer Office  
1110 West Washington Street, Suite 220  
Phoenix, AZ 85007

Greg Patterson, Esq.  
WUAA  
916 W. Adams - 3  
Phoenix, AZ 85007

Garry D. Hays, Esq.  
Law Offices of Garry D. Hays, P.C.  
1702 E. Highland Avenue, Suite 316  
Phoenix, AZ 85016

Court S. Rich, Esq.  
Rose Law Group, pc  
6613 N. Scottsdale Road, Suite 220  
Scottsdale, AZ 85250

Rick Fernandez  
25849 W. Burgess Lane  
Buckeye, AZ 85326

25  
26  
27  
By Rebbie Amara

**Water Loss Compliance Report**  
**Docket No. W-20445A-09-0077 et al; Decision No. 71878**

In compliance with the Arizona Corporation Commission's (Commission) Decision No. 71878, Global Water (Global) hereby files a plan for reducing water loss to below 10 percent in the following Global Utilities' Public Water Systems (PWS):

**Willow Valley Water Company (Willow Valley)**

- 08-129 Lake Cimarron
- 08-040 King Street

**Valencia Water Company – Greater Buckeye Division (Greater Buckeye)**

- 07-195 Sun Valley/Sweetwater I
- 07-129 Sweetwater II

**Water Utility of Greater Tonopah (Greater Tonopah)**

- 07-618 Buckeye Ranch
- 07-030 Dixie
- 07-733 West Phoenix Estates #6
- 07-617 Tufte
- 07-037 Garden City
- West Phoenix Estates #1

The Decision requires that if the Utility finds a reduction of water loss to less than 10 percent is not cost effective in a system, it shall file a detailed cost analysis and explanation of this determination. The Commission ordered that in any event, water loss shall not exceed 15 percent.

The following is Global's plan to reduce water loss, or unaccounted-for-water, to less than 10 percent for each individual PWS.

Global continues to believe that the blanket application of a percentage-based water loss metric does not fairly represent the actual state of a system, and that other methods for analyzing water loss that are more applicable to the specific characteristics of a PWS, such as Gallon Per Hour Per Mile Per Inch (GPHMI) and Unavoidable Annual Real Losses (UARL), as detailed in the Global's Rebuttal testimony on this matter<sup>1</sup>.

For the purposes of this plan Global will calculate unaccounted-for-water in the following manner, which is an accepted AWWA and industry standard.

((Volume of Water Supplied - (Volume of Customer Billed Water + Volume of Authorized Usage))

---

(Volume of Water Supplied)

---

<sup>1</sup> Docket No. SW-20445A-09-0077 et al, Rebuttal Testimony of Graham Symmonds, 20 November 2009, pp 23-31.

In developing this plan, Global is using a holistic approach that includes:

- Improvements to metering accuracy;
- Commissioning of audits and inspections;
- Implementing theft prevention programs; and
- Implementing leak detection programs.

## **OVERVIEW**

On acquisition of the West Maricopa Combine (WMC) utilities<sup>2</sup>, Global's focus was on ensuring the systems were upgraded to meet compliance with the new arsenic MCL, installation of chlorination systems, and rectifying other water quality, compliance, and reliability issues. As a small undercapitalized utility, WMC had taken a back-seat to operational efficiency and compliance activities. The result was there were numerous issues requiring immediate rectification by Global.

On completion of that work, Global began to review the systems and infrastructure from the perspective of water loss, led by Global's Water Loss Task Force (Task Force).

Key improvements made include:

1. Replacement of antiquated meters in Greater Tonopah and Greater Buckeye (2008)
2. Replacement of antiquated meters in Willow Valley (2010)

## **WATER LOSS MITIGATION PLAN**

The Global Water Task Force is charged with developing and executing a program to reduce unaccounted-for-water by focusing on: data and reporting (including documentation of water used for flushing and backwash activities); meter accuracy; audits; inspections; theft prevention; and leak detection and repair. The Task Force consists of managers, supervisors and certified operators who have the experience and expertise to correct water loss issues. In the following sections, we review the progress made on these concepts, all of which have been employed for each PWS.

### **Data and Reporting Accuracy**

Global employs water accounting as a routine business practice, producing monthly reports to track water use for each Utility.

---

<sup>2</sup> WMC consisted of Willow Valley Water Company, Valencia Water Company (now Valencia Water Company – Town Division), Water Utility of Greater Buckeye (now Valencia Water Company – Greater Buckeye Division), Water Utility of Greater Tonopah, and Water Utility of Northern Scottsdale.

Throughout 2010, Global implemented improved water accounting processes focused on ensuring the data is precise. This has been accomplished by leveraging numerous technology platforms Global deployed in our Utilities over the past several years. Global monitors the following parameters:

- Volume of Water Distributed - generated via facility checks and rounds data (stored in the Inframap water management system). This application allows Operators to enter production meter reads directly into an electronic system for continuous monitoring and reporting. When possible, we take the production meter reads directly from the Supervisory Control and Data Acquisition (SCADA) system, which monitors production meters real-time.
- Volume of Water Billed – this data is generated from our automated meter reading (AMR) system or through our customer information system. This information is augmented by the following automated reports:
  - Exception Reporting – Unusual usage patterns are flagged during routine reporting. These accounts are investigated, including field checks as necessary.
  - Zero Usage Reporting - For all active accounts that have zero usage for more than a single billing period, we issue a field investigation service order.
  - Manual reads and checks – When the AMR systems do not capture a read, it is Global's policy to issue a manual read service order to prevent estimated or zero usage reads.
  - AMR Alerts and Reports - The AMR systems themselves indicate many different failure or alert conditions. For example, we utilize the Tamper or No Read reports for when the radio modules do not receive a read from the meter. This error results in an immediate field investigation service order.
- Authorized Usage – this represents primarily internal Utility usage. These volumes are captured within our Cityworks work order management system.

These automated systems are combined to create a monthly Water Balance for each PWS. The result of this effort is more accurate, meaningful and actionable data available at exact intervals. This will also assist us in determining the effectiveness of the actions described in the following sections.

### **Metering Accuracy**

As discussed, all PWS referenced in this report have new customer point-of-sale meters. The new meters comply with all performance and material standards per AWWA standard C701, and were tested and certified by the manufacturer prior to delivery. Global will implement a meter testing program at the appropriate times for the new meters as they begin to age, in accordance with industry standards for meter size and type.

It is very important that the Utility's production meters also remain accurate. Each production meter is scheduled for testing, repair and calibration, or replacement in 2011. This program of continuous maintenance will continue annually.

## **Audits**

As part of the mitigation plan and due to some usage inconsistencies for several large diameter commercial customers, we recently executed an audit of certain meter classes including their settings in the associated billing systems. During this audit, we identified numerous accounts that had incorrect usage multipliers established at the date of meter install. These multipliers were off by a factor, and thus were only calculating 10 percent of actual usage for these customers. The multipliers have been corrected for the accounts identified.

We will continue to audit all systems, verifying all accounts have the correct metering information, including the correct number of dials and the correct multipliers in the AMR and billing systems.

## **Inspections**

Operations personnel have physically walked the waterline routes for the Greater Tonopah and Greater Buckeye systems, inspecting for visual indications of leaks. At all locations where leakage was evident, the pipeline has been or will be repaired.

Operations personnel also visually inspected all plant facilities, including tankage and mechanical piping, ensuring there is no on-site water loss.

## **Theft Prevention**

Due to the remote location and sparse population, systems in Greater Tonopah and Greater Buckeye are prone to water theft. This issue is difficult to eliminate, but while elimination is impossible, control becomes necessary. Global is implementing the following measures to control water theft:

- Inspection for illegal taps or bypassed meters during distribution system inspections;
- Removal of all unnecessary access points; and
- Installation of hydrant locks on secluded fire hydrants.

## **Leak Detection**

Global Water may choose to employ leak detection, but this would require the procurement of the necessary equipment or professional services. If leak detection ultimately becomes necessary to reduce water loss to less than 10 percent, Global will complete individual cost-benefit analyses for each PWS.

## **IMPACTS OF THE TO-DATE ACTIVITIES FOR EACH PWS**

The following tables indicate the improvements made in reducing water loss when comparing the most recent 12 month period, to the 2008 Water Use Data provided during the rate proceeding<sup>3</sup>. These reductions were accomplished by the execution of the mitigation plan as developed by the Water Loss

---

<sup>3</sup> See attachment A for an expanded spreadsheet which includes the specific pumped and sold volumes for each PWS for the periods indicated

Task Force. Global has expended significant labor hours for the in-field activities, which resulted in the following repair work in 2010, for the indicated geographical locations.

#### Willow Valley

08-129 Lake Cimmaron					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
23.4%	12.9%	-10.5%	1,585	19,204	131

- Replaced all customer meters in 2010.
- 14 curb stop valves were replaced as a result of malfunctions and leaks during the meter replacement project.

08-040 King St					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
20.2%	19.5%	-0.7%	20,307	103,294	1484

- Replaced all customer meters in 2010.
- 211 curb stop valves were replaced as a result of malfunctions and leaks during the meter replacement project.
- 14 service lines were repaired due to leaks located between the service saddle and the water main.
- 12 main line leaks were repaired<sup>4</sup>.

#### Greater Buckeye

07-129 Sweetwater II (1)					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
12.9%	2.9%	-10.0%	335	14,518	95

- Replaced all customer meters in 2008.
- 4 main line repairs resulting from system inspections.
- 5 service line repairs resulting from service and meter box inspections.

<sup>4</sup> Based on the local geological conditions, water does not tend to surface easily in Willow Valley. It is not until a considerable leak occurs that it can be identified via typical ground inspections.



07-195 Sun Valley					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
19.0%	2.1%	-16.8%	948	107,610	420

- Replaced all customer meters in 2008.
- 36 main line repairs resulting from system inspections.
- 3 hydrants identified where water theft is evident. We will install hydrant locks.

#### Greater Tonopah

07-618 Buckeye Ranch					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
10.1%	13.9%	3.8%	1,437	47,643	99

- Replaced all customer meters in 2008.
- 3 main line repairs resulting from system inspections.
- 4 service line repairs resulting from service and meter box inspections.
- 2 hydrants identified where water theft is evident. We will install hydrant locks.

07-030 Dixie					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
28.9%	3.6%	-25.3%	122	17,567	41

- Replaced all customer meters in 2008.
- Discovered and removed two illegal connections.

07-733 WPE 6					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
30.5%	18.4%	-12.1%	351	47,647	30

- Replaced all customer meters in 2008.
- 2 main line repairs resulting from system inspections.
- Repaired leaking storage tank.

07-617 Tufte					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
13.6%	17.6%	4.0%	75	4,937	7

- Replaced all customer meters in 2008.
- 2 main line repairs resulting from system inspections.
- Identified location of water theft from a "blow-off", we will remove appurtenance.
- Discovered leaking valves on distribution mains, repairs are being scheduled.
- Discovered leaking hydro-pneumatic tank, repairs are being scheduled.

07-037 Garden City					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
23.4%	19.4%	-4.0%	450	20,220	18

- Replaced all customer meters in 2008.
- 1 main line repair resulting from system inspections.
- Discovered and repaired leaking ground storage tank.
- Discovered unmetered hydrant regularly used by local fire department, this usage is now being collected.

WPE #1					
2008 Loss	2010 Loss	Delta	Gallons lost (1000s)	LF of pipe	Connections
31.5%	12.5%	-19.0%	48	33,106	8

- Replaced all customer meters in 2008.
- Standpipe leak discovered and isolated until repairs can be completed.
- Isolated unused portions of system.

## **CONCLUSION**

Global is committed to implementing best management practices to minimize water loss, and our effort to-date has been successful in reducing water loss in almost every PWS, including reducing both systems in Greater Buckeye to well below 10 percent. As many of the listed actions have been implemented over 2010, the water loss percentages in the other PWS will continue to decrease throughout 2011. Thus, we believe that the continued execution of the comprehensive plan will further reduce unaccounted-for-water, ultimately achieving less than or near the 10 percent requirement in all systems.

Global will complete the routine and minor repair and testing activities identified in the plan. If this plan is unsuccessful in achieving a water loss of 10 percent, a significant investment would be required

for the replacement of pipeline and plant infrastructure - resulting in significant rate increases for customers in smaller communities.

Based on the negative rate base in Greater Tonopah, such an investment would never be cost effective. For Willow Valley, as we have not completed nor fully realized the impacts of the above activities, most significantly the recently completed meter replacement project, we cannot yet determine if additional investments are necessary or would be cost effective to achieve less than 10 percent water loss for those PWS. Such cost analysis and explanations will be submitted to the Commission upon that determination. It is important to note that Global is currently completing a Technical Engineering Study on the Willow Valley distribution system. This study will serve as the basis for a long-term pipeline replacement program.

Exhibit A

\* in thousands

Utility	PWS	2010			2008			DELTA
		pumped *	sold *	% of water loss	pumped *	sold *	% of water loss	
Willow Valley Water Company								
	08-129 Lake Cimmaron	12,307	10,722	12.9%	13,543	10,379	23.4%	-10.5%
	08-040 King St	103,956	83,649	19.5%	115,312	91,995	20.2%	-0.7%
Valencia Water Company - Greater Buckeye Division								
	07-195 Sun Valley	44,294	43,346	2.1%	48,210	39,057	19.0%	-16.8%
	07-129 Sweetwater II (1)	11,370	11,035	2.9%	13,305	11,586	12.9%	-10.0%
Water Utility of Great Tonopah								
	07-618 Buckeye Ranch	10,304	8,867	13.9%	13,929	12,521	10.1%	3.8%
	07-030 Dixie	3,394	3,272	3.6%	5,656	4,023	28.9%	-25.3%
	07-733 WPE 6	1,909	1,558	18.4%	2,530	1,758	30.5%	-12.1%
	07-617 Tufte	428	353	17.6%	514	444	13.6%	4.0%
	07-037 Garden City	2,323	1,873	19.4%	2,560	1,960	23.4%	-4.0%
	WPE #1	384	336	12.5%	499	342	31.5%	-19.0%

(1) PWS is supplied via interconnect with the City of Goodyear, thus water supplied equals water received and is measured by a meter at the point of delivery to our PWS.